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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/806,067	03/23/2001	Andrew D. Piaskowski	SWA-02	1316
2387	7590	02/23/2004	EXAMINER	
OLSON & HIERL, LTD. 20 NORTH WACKER DRIVE 36TH FLOOR CHICAGO, IL 60606			NGUYEN, TUYEN T	
			ART UNIT	PAPER NUMBER
			2832	

DATE MAILED: 02/23/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/806,067

Applicant(s)

PIASKOWSKI ET AL.

Examiner

TUYEN T NGUYEN

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 23 March 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date ____.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first permanent magnetic core device and the second permanent magnetic core device joined in series so that a polarity of the first permanent magnetic core device is opposite to a polarity of the second permanent magnetic core device to control alternating current must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claim 18 is rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Applicant fails to disclose an adequate written description of the first permanent magnetic core

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device and the second permanent magnetic core device joined in series so that a polarity of the first permanent magnetic core device is opposite to a polarity of the second permanent magnetic core device to control alternating current.

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 18 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Applicant should clarify the structure and arrangement of the first permanent magnetic core device and the second permanent magnetic core device joined in series so that a polarity of the first permanent magnetic core device is opposite to a polarity of the second permanent magnetic core device to control alternating current.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-3 are rejected under 35 U.S.C. 102(b) as being anticipated by Bramanti [US 4,675,615].

Bramanti discloses a core structure [figure 4A] for an inductive device comprising:

- first and second core structures [C1, C2];

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- first and second permanent magnets [20, 22] disposed between the first and second core structures, wherein the first and second permanent magnets being placed so that their fields are additive; and
- at least one coil [T1, T2, T3, T4] surrounding each of the first and second core structures.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Asaoka [US 5,926,083].

Asaoka discloses a toroidal type magnetic core structure [figures 5A-B] comprising:

- first and second toroidal core elements [2], each having first and second ends;
- the first and second ends of the first toroidal core element being arranged to face the first and second ends of the second toroidal core element, such that the ends of the first and second toroidal core elements are opposed and spaced apart;
- first and second permanent magnets [1] disposed between the ends of the toroidal core elements and joined with the first end second toroidal core elements;
- a plurality of pole pieces [3] disposed around the periphery of the first and second toroidal core elements;

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- at least one coil [4] wound about the first and second toroidal core elements.

wherein the permanent magnets being spaced apart and arranged along a single plane.

Asaoka discloses the instant claimed invention except for the first and second toroidal core elements being of a semi-circular shape.

It would have been an obvious matter of design choice, absent evidence of criticality shown in the present invention and the lack of implicit or explicit limit to a specific design in the prior art, to use semi-circular shape for the first and second toroidal core elements, since applicant has not disclosed that the semi-circular core elements solve any stated problem or is for any particular purpose and it appears that the invention would perform equally well with the first and second toroidal core elements of Asaoka. It is noted that it is a truism that a claim need not be limited to a preferred embodiment. *Ethicon*, 93 F.3d at 1582 n.7, 40 USPQ2d at 1027 n.7 (quoting *In re Vickers*, 141 F.2d 522, 525, 61 USPQ2d 122, 125 (CCPA 1944)).

Regarding claims 8-12, the specific arrangement of the permanent magnets and the pole pieces would have been an obvious design consideration for the purpose of controlling the magnetic flux.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Bramanti in view of Tominaga et al. [US 5,821,844].

Regarding claim 4, Bramanti discloses the instant claimed invention except for magnetic pole pieces and their arrangement.

Tominaga et al. discloses a core structure [figures 4-9] comprising a plurality of core elements, a plurality of permanent magnets [4a] and a plurality of pole pieces [6] supporting the permanent magnets.

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It would have been obvious to one having ordinary skill in the art at the time the invention was made to include pole pieces in Bramanti, as suggested by Tominaga et al., for the purpose of reducing demagnetization.

Regarding claims 14-20, as best understood in view of the rejection under 35 USC 112 first and second paragraph, Bramanti discloses the instant claimed invention except for the specific design of the first and second core structures and their permanent magnets arrangement.

The specific three legs type core structures and permanent magnets arrangements would have been an obvious design consideration based on the intended applications and environment used and for the purpose of controlling the magnetic flux.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUYEN T NGUYEN whose telephone number is 703-308-0821. The examiner can normally be reached on M-F 8:30-6:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, ELVIN ENAD can be reached on 703-308-7619. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

TTN TTN

Tuyen Nguyen